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Anti-BMP2 Antibody (aa226-275)

Rabbit Anti Human Polyclonal Antibody
Catalog # ALS18089

Product Information

Application	WB, IHC-P, E
Primary Accession	P12643
Predicted	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	44702

Additional Information

Gene ID	650
Alias Symbol	BMP2
Other Names	BMP2, BDA2, BMP-2, BMP-2A, BMP2A, Bone morphogenetic protein 2, Bone morphogenetic protein 2A
Target/Specificity	BMP-2 antibody detects endogenous levels of BMP-2.
Reconstitution & Storage	Immunoaffinity purified
Precautions	Anti-BMP2 Antibody (aa226-275) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BMP2
Synonyms	BMP2A
Function	Growth factor of the TGF-beta superfamily that plays essential roles in many developmental processes, including cardiogenesis, neurogenesis, and osteogenesis (PubMed:18436533, PubMed:24362451, PubMed:31019025). Induces cartilage and bone formation (PubMed:3201241). Initiates the canonical BMP signaling cascade by associating with type I receptor BMPR1A and type II receptor BMPR2 (PubMed:15064755, PubMed:17295905, PubMed:18436533). Once all three components are bound together in a complex at the cell surface, BMPR2 phosphorylates and activates BMPR1A (PubMed:7791754). In turn, BMPR1A propagates signal by phosphorylating SMAD1/5/8 that travel to the nucleus and act as activators and repressors of transcription of target genes. Also acts to promote expression of HAMP, via the interaction with its receptor BMPR1A/ALK3 (PubMed:31800957). Can also

signal through non-canonical pathways such as ERK/MAP kinase signaling cascade that regulates osteoblast differentiation (PubMed:16771708, PubMed:20851880). Also stimulates the differentiation of myoblasts into osteoblasts via the EIF2AK3-EIF2A-ATF4 pathway by stimulating EIF2A phosphorylation which leads to increased expression of ATF4 which plays a central role in osteoblast differentiation (PubMed:24362451). Acts as a positive regulator of odontoblast differentiation during mesenchymal tooth germ formation, expression is repressed during the bell stage by MSX1-mediated inhibition of CTNNB1 signaling (By similarity).

Cellular Location Secreted.

Tissue Location Particularly abundant in lung, spleen and colon and in low but significant levels in heart, brain, placenta, liver, skeletal muscle, kidney, pancreas, prostate, ovary and small intestine

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.